ABSTRACT OF THE DISCLOSURE

A system and method for classification of data units in a network device acts as a bridge in heterogeneous networks, provides many different services and provisions many different transport mechanisms. The data classifier generates an ID that is internally used by the network device in managing, queuing, processing, scheduling and routing to egress the data unit. This internal ID enables the device to accept any type of data units from any physical/logical ports or channels and output those data units on any physical/logical ports or channels that are available. The device utilizes learning on a per-flow basis and can enable the device to identify and process data units used in private line services and private LAN services.